

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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25 YEAR RE-REVIEW

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This general summary deals with guided missile reconstruction within the framework of the development program carried on by the Rhein-Metall Borsig plant at Berlin-Marienfelde and in the USSR. It deals with several types of rockets, ground-to-air, air-to-air and air-to-ground. This program was conducted on a large scale, especially during the war. The Berlin-Marienfelde plant was especially constructed for this purpose. After the collapse of Germany, the German scientists were obligated by the terms of the capitulation to furnish technical information on their previous work. This included rockets, guided missiles, glide bombs, radar-controlled air and ground rockets, and controlled flakrockets.

The projects [redacted] in the Soviet Union were within this same framework of development. After about one and one-half or two years of working along these lines, remote control projects (Fernlenkung) were segregated from the German program and moved to the other side of the Ural Mountains.

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Great importance had been placed in Germany upon airborne air-to-air rockets for fighting bomber formations. This project was given number one priority in Germany during the last part of the war. All other tasks had to be sidetracked in favor of this program. The whole project was moved to Rhein-Metall Borsig range, including the automatic HF distance meter (range finder) (Hochfrequenzentfernungsmesser) and the proximity fuse program (Zuenderlaufblattstellung). The fact that the fuse of the rocket projectile exploded automatically at the most favorable distance is of great importance. In this respect, Germany developed another system for greater ranges. It was based upon the theory of fragmentation (Randsplitter) and rocket bombs filled with mines (small projectiles). In Germany, it was generally understood that the incendiary fragmentation equipment could bring about decisive results in the phase of the war at that time, but that it would not be a permanent solution because, even at that time, superior equipment for planes, such as automatic fire-fighting equipment, was being developed. It was expected that sooner or later countermeasures for incendiary fragmentation equipment would be developed by the Allies. For this reason, incendiary fragmentation could only be effective for a rather short period of time. The goal of Germany at that time was the destruction of B-29's. Therefore, at the most, the explosive charge had to be increased by 30%. The next development in this line involved the insertion of small projectiles into the rocket bombs in place of incendiary fragmentation. This would have such an explosive effect that even a B-29 bomber was rendered incapable of continuing its flight. [redacted] the explosive was 400 grams of tetramethylenetrinitramine (Hexogen) per projectile. The projectiles had small inherently stable bodies which traveled in the supersonic region. This opened up the road to success in this project.

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There were many different versions of this project in the USSR. Some were shot toward the front, some toward the side, etc.

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In the USSR, these projects were also worked on by a Soviet counterpart. Different variations (of guided missiles) were worked on in the Soviet Union.

There was one whose range was around 1,200 meters and another whose range was approximately 1,600 - 2,000 meters. The 1,600 - 2,000 meter missile needed a much larger power plant. The missiles in the USSR used powder exclusively.

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Another project was the "Monja" (German code name). In German this means "split". The "Monja" is a small air-to-ground rocket. It was a new development and was especially designed for fighting tanks and armored vehicles. It was to be used by low-speed aircraft (not over 300 km/h). It was released in a power dive with a relatively simple sighting device. The rocket held seven "mine" charges (minen geschosse). When the rocket was released, the "mines" rotated slowly. The "mines" had fins which were set at different angles. This caused them to deviate from the line of sight in such a manner as to form a checkerboard pattern about the target. By this distribution of charges, the sighting errors and flight discrepancies of the rockets were compensated for, and it was hoped that at least one of the charges would hit the target. These projectiles were equipped with a hollow charge with a penetration of 150 - 200 mm armor thickness. These projectiles were also equipped with an electrical detonator which was also activated through a pulse generator during the flight. This generator had been delivered some years before.

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the Soviets insisted on a rather tight schedule for this projectile. the Soviets believed it to be quite promising. The utilization of this projectile, however, would pose certain sighting problems with a relatively fast plane. Radar release of this projectile is impractical because there is no specific reflecting point, in contrast to

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plane-to-plane. at which to aim.

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